

**GREENBELT EARTH RESOURCES  
AFFECTED ENVIRONMENT  
OVERVIEW**

- Parcel topography is generally flat, particularly in the area of the existing parking lot and Indian Creek riparian forest with a slight slope between these two areas.
- Surface physiography of the Crownsville Upland District, where the Greenbelt site is located, is characterized by flat to gently southeast-dipping sedimentary beds of Quaternary lluvium and Tertiary terraces consisting mainly of quartzitic sands, gravels, silts, and clays.
- Five different soils were found on the site, which is composed of part asphalt and part forest, including Udorthents, Highway complex; Udorthents, Loamy complex; Zekiah and Issue soils complex; Russet-Christiana-Urban land complex and Elkton–Urban Land complex.

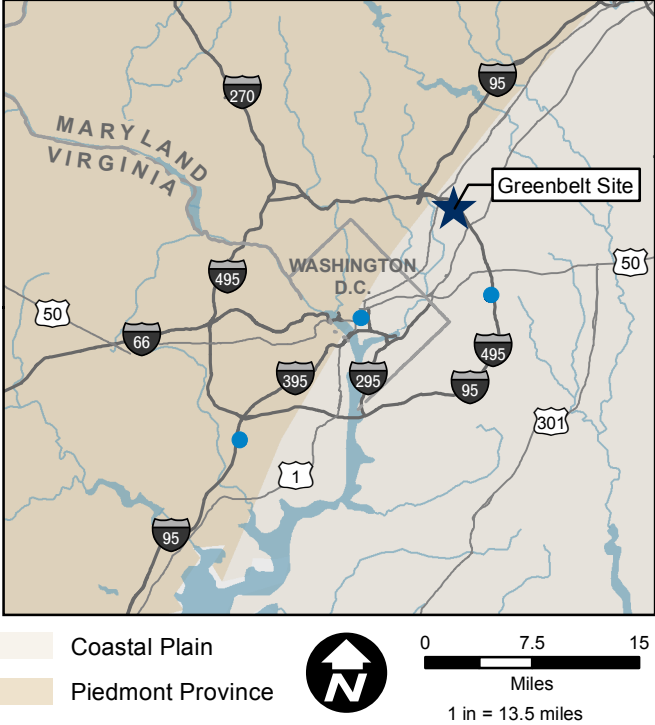
**PHYSIOGRAPHIC PROVIDENCE**

A geographic region with a characteristic geomorphology and often specific subsurface rock type or structural elements.

**FALL LINE**

The geomorrphologic break between an upland region of relatively hard, crystalline basement rock and a coastal plain of softer sedimentary rock.

Figure 5-2: Physiographic Provinces of the National Capital Region



The analysis of environmental impacts for the Greenbelt Alternative is based on the conceptual site plan shown in Figure 5-1. This site plan is informed by both site planning principles and design requirements based on FBI program needs. These site plans are conceptual in nature and represent a program-compliant layout that would yield the most conservative estimate of the environmental impacts associated with each alternative. Ultimately, the layout and design of the proposed FBI HQ could potentially be altered during the final design process with the selected exchange partner. GSA would perform supplemental NEPA analysis, as necessary, if there is substantial variance from what is considered in this EIS.

**5.1 Affected Environment**

The following sections describe the affected environment for the Greenbelt site and associated study areas for each resource topic evaluated in this Environmental Impact Statement (EIS).

**5.1.1 Earth Resources**

Earth resources encompass geology, topography, and soils.

**5.1.1.1 Geology and Topography**

The Greenbelt site is situated within the western shore uplands region Atlantic Coastal Plain physiographic province, as shown in figure 5-2 (NPS 2008) (Reger and Cleaves 2008). The Coastal Plain physiographic province is bordered by the Atlantic Ocean to the east and the Piedmont physiographic province to the west, and ranges from the southern portion of Florida to southern Massachusetts. The division between the Coastal Plain and Piedmont provinces is also referred to as the fall line (Froelich and Hack 1975). The Coastal Plain is characterized by gently rolling hills and valleys and is underlain by a southeastwardly thickening sequence of sediments consisting of sand and gravel aquifers interlayered with silt and clay and confining units. The sediments of the Coast Plain dip eastward at a low angle, generally less than one degree, and range in age from Triassic (250 to 200 Mya) to Quaternary (2.6 million years ago [Mya] to present). Mineral resources of the coastal plain are chiefly sand and gravel that are used as aggregate materials by the construction industry (MGS 2014).

Within the Atlantic Coastal Plain and the western shore upland region, the Greenbelt site lies within the Crownsville Upland District, which is characterized by flat to gently southeast-dipping sedimentary beds of Quaternary alluvium and Tertiary terraces consisting mainly of quartzitic sands, gravels, silts, and clays. The Greenbelt site lies within a shallow valley formed by Indian Creek. Overall, the site is flat; however, there is a slight to moderate slope between the existing parking lot and Indian Creek riparian forest. The overall elevation ranges from approximately 70 to 80 feet above mean sea level (AMSL) as shown in figure 5-3.

The geology of the Greenbelt site is heavily influenced by Indian Creek. According to the geologic map of Prince George's County, Maryland, geologic deposits along the banks of Indian Creek consist of Pleistocene- and Holocene-aged interbedded sand, silt-clay, and gravel alluvium with an average thickness of approximately 15 feet, and a maximum of 40 feet (Glaser 2003). Surrounding the alluvium deposits are 20 to 25 feet thick early Quaternary-aged terrace deposits of interbedded sand, gravel, and silt-clay. The majority of the site is underlain by Cretaceous-aged sand and gravel of interbedded quartz sand, pebbly sand, gravel, and silt-clays with a maximum thickness of 1,000 feet. Superficial geologic features have been previously disturbed by the operation of a sand and gravel mining operation, and the subsequent introduction of fill from the construction of Lake Artemesia for the construction of the Greenbelt Metro Station surface parking lot (Prince George's County Planning Department 2012). Figure 5-4 illustrates the geology of the Greenbelt site and its environs.

Figure 5-3: Greenbelt Topography

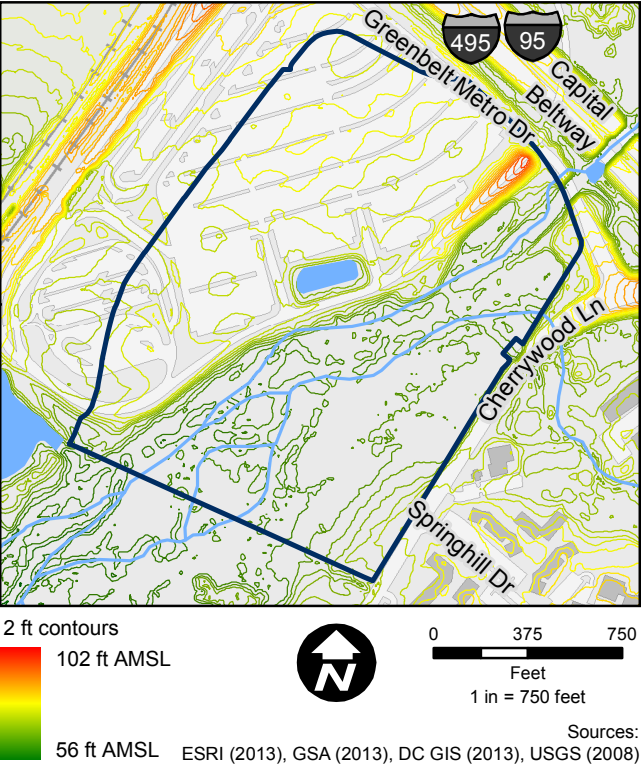
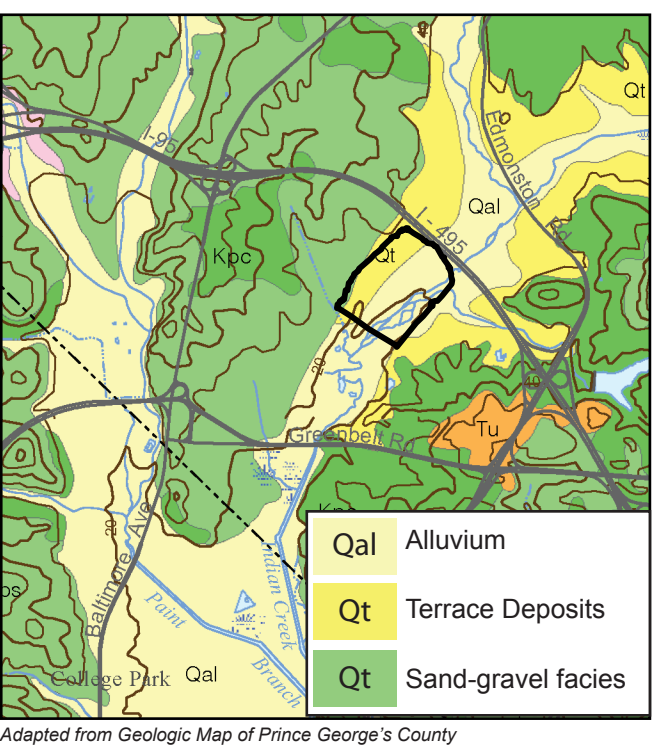


Figure 5-4: Greenbelt Geology Overview



**AMSL**

Above mean sea level (AMSL) is the average level for the surface of one or more of Earth's oceans from which heights such as elevations may be measured.